

OPINIONS AND DECLARATIONS RENDERED BY THE INTER- NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the Commission

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OPINION 426

Designation under the Plenary Powers of type species in harmony with accustomed usage for the genera *Pictonia* Bayle, 1878, and *Rasenia* Salfeld, 1913 (Class Cephalopoda, Order Ammonoidea) (Jurassic)

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OPINION 426

DESIGNATION UNDER THE PLENARY POWERS OF TYPE SPECIES IN HARMONY WITH ACCUSTOMED USAGE FOR THE GENERA "PICKTONIA" BAYLE, 1878, AND "RASENIA" SALFELD, 1913 (CLASS CEPHALOPODA, ORDER AMMONOIDEA) (JURASSIC)

RULING :—(1) Under the Plenary Powers all designations, indications or selections of type species for the under-mentioned genera are hereby set aside and the species specified below are hereby designated to be the type species of the genera in question :—

- (a) To be the type species of *Pictonia* Bayle, 1878 :
Pictonia baylei Salfeld, 1913, a nominal species based upon the specimen figured under the incorrect name *Pictonia cymodoce* d'Orbigny by Bayle on plate lxvi in 1878 when establishing the nominal genus *Pictonia* ;
- (b) To be the type species of *Rasenia* Salfeld, 1913 :
Rasenia involuta (Salfeld MS.) Spath, 1935, as represented by figs. 5a and 5b on Spath's plate 10.

(2) The under-mentioned generic names are hereby placed on the *Official List of Generic Names in Zoology* with the Name Numbers 1019 and 1020 respectively :—

- (a) *Pictonia* Bayle, 1878 (gender : feminine) (type species by designation under the Plenary Powers, under (1)(a) above and as there interpreted : *Pictonia baylei* Salfeld, 1913) ;

- (b) *Rasenia* Salfeld, 1913 (gender : feminine) (type species, by designation under the Plenary Powers under (1)(b) above and as there interpreted : *Rasenia involuta* Spath, 1935).

(3) It is hereby directed that the nominal species *Ammonites cymodoce* d'Orbigny, 1850, is to be interpreted by the lectotype selected therefor by Tornquist in 1896, that is, by the specimen illustrated by d'Orbigny as figures 3 and 4 on his plate 202.

(4) The under-mentioned specific names are hereby placed on the *Official List of Specific Names in Zoology* with the Name Numbers severally specified below :—

- (a) *baylei* Salfeld, 1913, as published in the combination *Pictonia baylei* and as interpreted in (1)(a) above (specific name of type species of *Pictonia* Bayle, 1878) (Name No. 1036) ;
- (b) *involuta* Spath, 1935, as published in the combination *Rasenia involuta* and as interpreted in (1)(b) above (specific name of type species of *Rasenia* Salfeld, 1913) (Name No. 1037) ;
- (c) *cymodoce* d'Orbigny, 1850, as published in the combination *Ammonites cymodoce* and as interpreted in (3) above (Name No. 1038).

I. THE STATEMENT OF THE CASE

Application submitted by Dr. W. J. Arkell : On 13th June 1949, Dr. W. J. Arkell (*Sedgwick Museum, Cambridge University, Cambridge*) submitted to the International Commission on

Zoological Nomenclature an application in which he asked for the use of the Plenary Powers for the purpose of designating type species in harmony with current practice for the genera *Pictonia* Bayle, 1878, and *Rasenia* Salfeld, 1913 (Class Cephalopoda, Order Ammonoidea). The problems involved were of considerable complexity and necessitated correspondence between the Secretary and the applicant. This led to an agreement under which Dr. Arkell would revise his application in certain respects, while Mr. Hemming as Secretary to the Commission would add a supplementary note on certain of the purely nomenclatorial problems involved. The terms of these documents were settled on 10th September 1950, on which date the following paper was submitted by Dr. Arkell :—

**Proposed designation under the Plenary Powers, of the type species,
of "Pictonia" Bayle, 1878, and "Rasenia" Salfeld, 1913
(Class Cephalopoda, Order Ammonoidea) (Jurassic)**

By W. J. ARKELL, M.A., D.Sc., F.R.S.
(*Sedgwick Museum, Cambridge University*)

1. The generic name *Pictonia* Bayle, 1878 (: pl. lxvi) was published in explanation of a plate only, with the legend "*Pictonia cymodoce* d'Orbigny". The figure so referred to showed accurately a species differing from *Ammonites cymodoce* d'Orbigny, 1850 (: pl. 202). The Text of Bayle's work was never published. The species so figured by Bayle was named *Pictonia baylei* by Salfeld in 1913 (: 423).

2. Salfeld (1917 : 73) selected *Pictonia baylei* Salfeld, 1913, as the type species of the genus *Pictonia* Bayle, and this selection has been generally followed by subsequent workers. Under the decision taken by the Thirteenth International Congress of Zoology in 1948, when incorporating in the *Règles* the substance of *Opinion* 168, the type species of *Pictonia* is the nominal species *Ammonites cymodoce* d'Orbigny, 1850, whatever that species may be, unless the Commission uses its Plenary Powers to designate some other species as the type species (1950, *Bull. zool. Nomencl.* 4 : 158—159). The nominal species *Ammonites cymodoce* d'Orbigny was based by its author on two syntypes, of which one, the larger, he figured as figs. 1 and 2 on his plate 202, while the other (i.e. the smaller syntype) he figured as figs. 3 and 4 on the same plate. Tornquist (1896 : 8) recognised that these two syntypes were not conspecific. He thereupon selected the smaller one (i.e. d'Orbigny's figs. 3 and 4) as the lectotype of *Ammonites*

cymodoce d'Orbigny, at the same time making d'Orbigny's larger syntype (figured by d'Orbigny as figs. 1 and 2 on plate 202) the holotype of a new nominal species to which he gave the name *Pictonia orbignyi*. Thus, under the *Règles*, the type species of the genus *Pictonia* Bayle is the species figured by d'Orbigny in his figs. 3 and 4 on plate 202.

3. Lemoine (1904 : no. 55) re-figured what he claimed to be d'Orbigny's syntypes of *Ammonites cymodoce*. The larger specimen is clearly the one represented in d'Orbigny's larger figures, figs. 1 and 2 (the type specimen of *Pictonia orbignyi* Tornquist), but the smaller specimen figured by Lemoine differs in many respects from d'Orbigny's smaller figures, figs. 3 and 4 (lectotype of *cymodoce*) and it seems very doubtful whether the specimen has been correctly identified (see Arkell, 1935 : 250). The species *A. cymodoce* d'Orbigny therefore rests on insecure foundations and is unsuitable as the type species of a genus.

4. In 1913 Salfeld (1913 : 249) founded the genus *Rasenia*, with type species by original designation *A. cymodoce* d'Orbigny, as represented by the larger figures only (figs. 1 and 2). But under the decision taken by the Thirteenth International Congress of Zoology in 1948, referred to in paragraph 2, the type species of *Rasenia* is the nominal species *A. cymodoce* d'Orbigny, which by Tornquist's selection of 1896 (see paragraph 2 above) was fixed on d'Orbigny's figs. 3 and 4. Moreover, the specimen represented in d'Orbigny's figs. 1 and 2 was already the holotype of *Pictonia orbignyi* Tornquist, 1896 (see para. 2 above).

5. From Salfeld's writings it seems certain that his designation of d'Orbigny's figs. 1 and 2 as representing the type species of *Rasenia* was a slip, for his use of the genus *Rasenia* shows clearly that what he had in mind was d'Orbigny's figs. 3—4 (i.e., the lectotype specimen of *A. cymodoce*), not figs. 1 and 2, which he would have called *Pictonia orbignyi* Tornquist; and he says of *Rasenia* "Another characteristic species is *Ammonites uralensis* d'Orbigny" (1845), which closely resembles d'Orbigny's (1850) figs. 3 and 4 but not figs. 1 and 2.

6. So apparent is Salfeld's intention in all his writings that the latest monographer (Schneid, 1940 : 79) has asserted that Salfeld did select d'Orbigny's figs. 3—4 as representing the type species of *Rasenia*. Unfortunately it requires more than this assertion to correct Salfeld's error.

7. As the Rules stand, therefore, *A. cymodoce* d'Orbigny (1850, figs. 3—4) is type species of both *Pictonia* Bayle, 1878, and *Rasenia* Salfeld, 1913. Since the type specimen is doubtful, this species is unsuitable to be type species of any genus (see paragraph 3 above), and the Commission is now asked to designate new type species for both genera.

8. The obvious type species for *Pictonia* is the one already widely accepted as such, namely, *Pictonia baylei* Salfeld. A suitable type species for *Rasenia* is less obvious. *A. uralensis* d'Orbigny (1845 : 429, pl. xxxii) would be suitable, but that the smaller, young, individual in d'Orbigny's figs. 8 and 9 has been selected as lectotype of this species by R. Douvillé (1911, n. 210) and it is so small that it leaves the nature of the species in doubt. In view of this the best choice is another species assigned by Salfeld himself to *Rasenia*, though not published until much later : namely, *Rasenia involuta* (Salfeld MS.) in Spath (1935 : 48, pl. 10, figs. 5a, 5b). This is close to the larger figured example of *A. uralensis* d'Orb. (1845, figs. 6—7) and has the advantage of having come from the brickpits in the Lower Kimeridge Clay of Market Rasen, Lincolnshire, after which the genus was named *Rasenia*.

9. I therefore recommend that, in order to avoid the confusion which otherwise is inevitable, the International Commission on Zoological Nomenclature should use their Plenary Powers to set aside all existing type designations or type selections for the under-mentioned genera and to designate as their respective type species the species specified below :—

Pictonia Bayle, 1878 : type species to be *Pictonia baylei* Salfeld, 1913 (based on Bayle, 1878 : pl. lxvi, from the lower Kimeridgian of Normandy) (gender of generic name : feminine).

Rasenia Salfeld, 1913 : type species to be *Rasenia involuta* (Salfeld MS.) Spath (1935 : 48, pl. 10, figs. 5a, 5b, from the Lower Kimeridge Clay of Market Rasen, Lincolnshire) (gender of generic name : feminine).

10. Consequential upon the adoption of the foregoing recommendation, the Commission are asked to place on the *Official List of Generic Names in Zoology* the generic names *Pictonia* Bayle, 1878, and *Rasenia* Salfeld, 1913, and on the *Official List of Specific Trivial Names in Zoology* the trivial names *baylei* Salfeld, 1913, as published in the combination *Pictonia baylei*, and *involuta* (Salfeld MS.) Spath, 1935, as published in the combination *Rasenia involuta*.

References :

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- Bayle, E., 1878. Explic. Carte géol. France, 4 : Atlas
- Douvillé, R., 1911: *Palaeontologia Universalis*
- Lemoine, E., 1904. *ibid.*
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- Orbigny, A. d', 1850. *Paléontologie Française, Terrains Jurassiques, Céphalopodes*
- Salfeld, H., 1913. "Certain Upper Jurassic Strata of England". *Quart. J. geol. Soc., Lond.* **69** : 423
- Salfeld, H., 1917. "Monographie der Gattung *Ringsteadia*." *Palaeontographica* **lxii**, **62** : 69
- Schneid, T., 1940. "Über Raseniiden, Ringsteadiiden und Pictoniiden des nördlichen Frankenjura." *Palaeontographica* **91** : 79
- Spath, L. F., 1935. "The Upper Jurassic invertebrate faunas of Cape Leslie, Milne Land, 1 Oxfordian and Lower Kimmeridgian". *Meddelelser om Grønland*, **99**, n. 2
- Tornquist, A., 1896. "Die degenerierten Perisphinctiden des Kimmeridge von Le Havre." *Mém. Soc. pal. Suisse*, **33** : 1

2. Supplementary note on nomenclatorial issues submitted by the Secretary : The following is the supplementary note on nomenclatorial issues submitted by the Secretary in agreement with the applicant in the present case :—

On the proposals relating to the determination of the type species of the nominal genera "Pictonia" Bayle, 1878, and "Rasenia" Salfeld, 1913 (Class Cephalopoda, Order Ammonoidea) submitted to the International Commission on Zoological Nomenclature by Dr. W. J. Arkell

By FRANCIS HEMMING, C.M.G., C.B.E.

(Secretary to the International Commission on Zoological Nomenclature)

1. The case of the generic names *Pictonia* Bayle, 1878, and *Rasenia* Salfeld, 1913, submitted to the Commission by Dr. W. J. Arkell, is one of peculiar complexity, owing to the facts that, as specialists are agreed, (1) the nominal genus *Pictonia* Bayle was based upon a misidentified type species, (2) the type species of *Rasenia* Salfeld was cited by the author of that name in a misleading manner, and (3) the nominal species which (as shown below) is, under the *Règles* the type species of both genera is a species which, when its name was first published, was a composite species, the division of which, under Article 31, has proved a matter of difficulty. Passing from the nomenclatorial aspects of this case to the taxonomic aspects, as laid before the Commission, we shall find that the strict application of the *Règles* to these generic names

would have the effect (i) of transferring to the genus *Pictonia* the species at present referred to the genus *Rasenia*, (ii) of making *Rasenia* an objective synonym of *Pictonia*, and (iii) of making it necessary to find some new generic name for the species at present placed in the genus *Pictonia*. It is Dr. Arkell's object to prevent the serious confusion to which the foregoing changes would give rise, by enlisting the help of the Commission through the use of its Plenary Powers. In order to grasp the nomenclatorial implications of this difficult case, I have found it necessary for my own purposes to prepare the present analysis of the data submitted as a preliminary to considering exactly what action by the Commission would be necessary to secure the ends sought by Dr. Arkell.

The type species, under the "Règles", of the nominal genera "Pictonia" Bayle, 1878, and "Rasenia" Salfeld, 1913

2. *Type species of Pictonia Bayle, 1878* : The generic name *Pictonia* was first published in 1878 by Bayle in volume 4 of the *Atlas to the Carte géologique de France* ; it there appeared in the explanation to plate lxxvi in the form of the following legend : "*Pictonia cymodoce* d'Orbigny". No explanatory text was ever published by Bayle. From the standpoint of nomenclature the nominal genus *Pictonia* Bayle, 1878, has, as its type species by monotypy, the species *Ammonites cymodoce* d'Orbigny, 1850, whatever that species may be. (It may here be noted that, until the meeting of the Thirteenth International Congress of Zoology in Paris in 1948 it had never been made clear authoritatively whether a generic name published in this way on the legend of a plate could properly be regarded as having been published with an indication for the purposes of Article 25 or whether a name so published ought, under the *Règles*, to be regarded as a *nomen nudum*. At the foregoing Congress consideration of this question was given in connection with an application submitted, as a test case, by Dr. Harald A. Rehder (United States National Museum, Washington, D.C.) regarding the status of the generic name *Erycina* Lamarck, 1801 ; it was then decided that words should be inserted in the *Règles* " to make it clear that a generic name published prior to 1st January 1931, on a legend to a plate or plates but without explanatory matter is to be treated as having been published with an ' indication ' for the purposes of Article 25 " (see 1950, *Bull. zool. Nomencl.* 4 : 255). Accordingly, any doubts which may formerly have existed regarding the availability of the generic name *Pictonia* as from the time when it was first published by Bayle in 1878 have now been set at rest.)

3. *Type species of Rasenia Salfeld, 1913* : The generic name *Rasenia* was first published by Salfeld in 1913 (*Quart. J. geol. Soc.* 69 : 423). He designated as the type species of this genus, *Ammonites cymodoce* d'Orbigny, 1850. That species, whatever it may be, is therefore the type species of this genus. In making this type designation, Salfeld noted that he regarded figs. 1 and 2 on plate 202 of d'Orbigny's work

as representing the true *Ammonites cymodoce* d'Orbigny ; he presumably added this note, because he was aware that (as pointed out by Tornquist (1896)) (paragraph 6 below) d'Orbigny's nominal species *Ammonites cymodoce*, when first established, was a composite nominal species and he wished therefore to indicate that, in referring to that species, he (Salfeld) had in mind the species represented by d'Orbigny's figs. 1 and 2 and not that represented by that author's figs. 3 and 4. In this connection we have to pay special heed to the action taken by the Thirteenth International Congress of Zoology in Paris in 1948, when it incorporated into the *Règles* in a clarified and expanded form the rulings on the subject of the type species of genera established with misidentified type species previously given by the Commission in their *Opinions* 65 and 168. It will be noted that in their amended form the *Règles* provide that an author who published a name for a genus is to be assumed "to have identified correctly the nominal species referred by him to the genus so named and therefore that, where . . . the original author himself designates or indicates . . . one of the originally included nominal species to be the type species of the genus, the designation . . . so made, is not to be rejected on the ground that the original author of the generic name misidentified some other nominal species with that nominal species" (1950, *Bull. zool. Nomencl.* 4 : 158). It is perfectly clear therefore that, under the *Règles*, the type species of *Rasenia* Salfeld, 1913, is *Ammonites cymodoce* d'Orbigny, 1850, by original designation. The present case is, however, complicated by the fact that Salfeld, when citing the name *Ammonites cymodoce* d'Orbigny, added that he identified that species with figs. 1 and 2 given by d'Orbigny on his plate 202, whereas it is clear, as Dr. Arkell points out, from other observations made by Salfeld that he intended to refer not to the foregoing figures but to d'Orbigny's figs. 3 and 4 (which had been made the lectotype of *Ammonites cymodoce* d'Orbigny by Tornquist in 1896 (see table in paragraph 6 below)). This note by Salfeld has led to the conclusion by some workers that the species represented by d'Orbigny's figs. 1 and 2 must (contrary to Salfeld's intention) be accepted as the type species of *Rasenia*, but, as will be seen from the decision by the Congress quoted above, this is not so, for the type species of a genus must be the species represented by the nominal species designated as the type species, in the present case, *Ammonites cymodoce* d'Orbigny, 1850, the lectotype of which (as already stated) is the species represented not by d'Orbigny's figs. 1 and 2 but that represented by his figs. 3 and 4. Thus, in fact, Salfeld's action constitutes, under the *Règles*, a valid designation, as the type species of *Rasenia*, of the species which he intended to designate (i.e. the species represented by d'Orbigny's figs. 3 and 4), notwithstanding the fact that the note which he added, by some slip of the pen, implied that he intended to designate, as the type species of this genus, the species represented by d'Orbigny's figs. 1 and 2.

4. *Nomenclatorial relationship of the nominal genera* *Pictonia* Bayle, 1878, and *Rasenia* Salfeld, 1913, with one another : In the preceding

paragraphs, we have seen that the type species of *Pictonia* Bayle, 1878, is, under the *Règles*, the nominal species *Ammonites cymodoce* d'Orbigny, 1850 (paragraph 2) and that the same nominal species is the type species of *Rasenia* Salfeld, 1913. Thus, under the *Règles*, the generic name *Rasenia* Salfeld, 1913, is a synonym of *Pictonia* Bayle, 1878 (the nominal genera, so named, having the same nominal species as their respective type species). Under a strict application of the *Règles*, the generic name *Rasenia* Salfeld, 1913, is an invalid name and disappears from the literature, unless the Commission confers availability upon it by varying its type species under the Plenary Powers.

The identity of the nominal species “*Ammonites cymodoce*” d'Orbigny, 1850

5. Having ascertained that, under the *Règles*, the nominal species *Ammonites cymodoce* d'Orbigny, 1850, is the type species both of *Pictonia* Bayle, 1878, and of *Rasenia* Salfeld, 1913, we have now to consider the question, partly nomenclatorial and partly taxonomic, of the identity of the species to which under the *Règles* the specific name *Ammonites cymodoce* d'Orbigny, 1850, properly applies. The nomenclatorial procedure for determining the type specimen of a nominal species or the figure or description which exclusively represents the type specimen of a nominal species, both where such a species is regarded by specialists as having originally been a composite species and where it is not so regarded, is laid down in Article 31 of the *Règles*, as amplified and clarified by the Thirteenth International Congress of Zoology in 1948 (see, 1950, *Bull. zool. Nomencl.* 4 : 73—76). Taxonomic considerations are involved in such a case only where specialists in the group concerned are of the opinion, as in the present case, that the nominal species under consideration was originally a composite species. In discussing in the following paragraphs this aspect of the present case, I naturally rely entirely upon the views expressed by Dr. Arkell and by the authorities whom he cites, having myself no personal knowledge in this matter.

6. The nominal species *Ammonites cymodoce* d'Orbigny, 1850, was based by its author upon four figures (figs. 1—4) given by him on plate 202 of his work. Figures 1 and 2 represent one specimen, figures 3 and 4 another. These two specimens are therefore the sole syntypes of this nominal species, the first syntype being represented by figs. 1 and 2, the second, by figs. 3 and 4. These two syntypes have since the time of Tornquist (1896 : 8) been regarded as being specifically distinct from one another. In the ensuing discussion, I refer to the species represented by the syntype represented by figs. 1 and 2 as Species “A”, and to the species represented by the syntype represented by figs. 3 and 4 as Species “B”. In the following table I have assembled certain

particulars in regard to species "A" and species "B" given by Dr. Arkell, which throw important light both on the nature of the problem and on the character of the action required to avoid the confusion apprehended by Dr. Arkell.

Particulars relating to the two taxonomic species considered by specialists to have been included by d'Orbigny in his composite nominal species "Ammonites cymodoce" d'Orbigny, 1850

	<i>Species "A"</i>	<i>Species "B"</i>
Figure given by d'Orbigny.	Figs. 1 and 2 on pl. 202.	Figs 3 and 4 on pl. 202.
Relationship of d'Orbigny's figures to the specimens claimed by Lemoine to have been identified as the syntypes on which those figures were based.	"The larger specimen is clearly the one represented in d'Orbigny's larger figures, figs. 1 and 2" (Arkell).	"The smaller specimen figured by Lemoine differs in many respects from d'Orbigny's smaller figures, figs. 3 and 4, and it seems very doubtful whether the specimen has been correctly identified" (Arkell).
Species to which the name <i>Ammonites cymodoce</i> d'Orbigny applies through the selection of a lectotype from the original syntypes.	—	Tornquist (1896) selected figures 3 and 4 on pl. 202 to represent the lectotype of <i>Ammonites cymodoce</i> d'Orbigny, which thus became the name of Species "B".
Name given to the syntype not selected as the lectotype of <i>Ammonites cymodoce</i> d'Orbigny.	Tornquist (1896) established a new nominal species, <i>Pictonia orbigni</i> , expressly based on d'Orbigny's figs. 1 and 2.	—
Relative size of d'Orbigny's syntypes.	Larger than that represented by d'Orbigny's figs. 3 and 4.	Smaller than the syntype represented by d'Orbigny's figs. 1 and 2.
Distinguishing characters of d'Orbigny's syntypes.	"A smooth ammonite with flared ribs on the inner whorls" (Arkell).	"A strongly ribbed ammonite showing ribs swung well forward but none of them flared" (Arkell).
Genera to which species corresponding with d'Orbigny's syntypes commonly referred.	<i>Pictonia</i> Bayle, 1878.	<i>Rasenia</i> Salfeld, 1913.

7. The data assembled in the foregoing table show :—

- (a) that *Ammonites cymodoce* d'Orbigny, 1850, the type species' under the *Règles* (paragraph 2) of *Pictonia* Bayle, 1878, is in fact a species belonging to the group referred to the genus *Rasenia* Salfeld, 1913 ;
- (b) that the acceptance of the above species as the type species of *Pictonia* Bayle, 1878, by involving the transfer to that genus of the species at present referred to *Rasenia* Salfeld, 1913, and the transfer to some other genus of the species currently referred to *Pictonia* Bayle, would create confusion in the nomenclature of the genera and species concerned.

Species intended by Bayle to be referred to the genus " *Pictonia* " Bayle, 1878, as contrasted with the species referable thereto under the " *Règles* " in consequence of " *Ammonites cymodoce* " d'Orbigny, 1850, being the type species of that genus.

8. We have seen (paragraph 2) that the type species of *Pictonia* Bayle, 1878, under the *Règles* is *Ammonites cymodoce* d'Orbigny, 1850, and (paragraph 7) that this species is not a species of the genus *Pictonia* Bayle, as currently understood. This is because a further error of determination was committed by Bayle himself who, when citing the above species in explanation of his plate lxvi, applied its name to the figure of a specimen of a different species. This error was detected by Salfeld in 1913 who gave to the species figured by Bayle the name *Pictonia baylei*. In 1917 Salfeld followed this up by selecting *Pictonia baylei* Salfeld, 1913, as the type species of the genus *Pictonia* Bayle. In this action Salfeld has been generally followed by later writers and it is this practice that has given rise to the current conception of the genus *Pictonia*. Salfeld's action in 1917 was invalid, because, as already explained (paragraph 2), the type species of *Pictonia* Bayle had been *Ammonites cymodoce* d'Orbigny, by monotypy, from the moment that the name *Pictonia* was first published in 1878.

Action suggested to prevent confusion which would follow the strict application of the " *Règles* " in the present case

9. The Thirteenth International Congress of Zoology, when revising the *Règles* in Paris in 1948, provided (as indicated in paragraph 3 above) a remedy in cases where the acceptance, as the type species, of the nominal species designated, indicated or selected as such under Article 30 of the *Règles* would clearly lead to confusion, owing to the nominal genus in question having been based upon a misidentified type species. The remedy so provided (see 1950, *Bull. zool. Nomencl.* 4 : 158—159) was that the Commission, if satisfied that such a misidentification had occurred, is " under its Plenary Powers, to designate as the type species of the genus concerned, either (a) the species intended by the original author when citing the name of the erroneously determined

species, or (b) if the identity of that species is doubtful, a species in harmony with current nomenclatorial usage". It is this provision which Dr. Arkell seeks to invoke in the present case.

10. The purpose of the action recommended being to secure that the nominal genera *Pictonia* Bayle, 1878, and *Rasenia* Salfeld, 1913, shall have, as their respective species, species which are in harmony with the current usage of these generic names, the first action required is that the Commission should use its Plenary Powers to set aside all type designations, indications or selections made for either of the foregoing nominal genera prior to the date of the action proposed. When we turn to the question of the species which should be designated under the Plenary Powers to be the type species of these genera, it is immediately evident that in the case of the genus *Pictonia* Bayle, 1878, the species which should be designated as the type species is *Pictonia baylei*, 1878, that being (a) the species figured by Bayle (under the erroneous name *Pictonia cymodoce* d'Orbigny) at the time when he first published the generic name *Pictonia*, and (b) the species which is commonly (though incorrectly) regarded as the type species of that genus and which in consequence has given rise to the commonly accepted concept of the scientific content of this genus. When we turn to the question of the type species of the genus *Rasenia* Salfeld, 1913, the position is found to be somewhat different. In this case, the type species (*Ammonites cymodoce* d'Orbigny, 1850) is, as specialists agree, a species belonging to the genus *Rasenia* as currently understood. Dr. Arkell has expressed the opinion, however, that the grave discrepancies between d'Orbigny's figs. 3 and 4 (representing the lectotype of *Ammonites cymodoce* d'Orbigny) and the specimen claimed by Lemoine (1904) to be the actual specimen from which those figures were prepared throw the specific identity, he thinks, even the generic affinities, of that nominal species into doubt and make it unsuitable to be the type species of this important genus. I agree with the view expressed by Dr. Arkell in this matter and concur in his suggestion that some species of undoubted identity, and one clearly belonging to the genus *Rasenia* Salfeld, as currently understood, should be designated as the type species of that genus. The species suggested for this purpose by Dr. Arkell is *Rasenia involuta* (Salfeld MS.) Spath, 1935 (*Meddelelser Grønland* 99 (No. 2) : 48 pl. 10, figs. 5a, 5b). I should add that, if the nominal species *Ammonites cymodoce* d'Orbigny is to be displaced for the foregoing reasons, from its position as the type species of *Rasenia* Salfeld, the logical course would be to recognise that the specific name *Ammonites cymodoce* d'Orbigny, 1850, is an unwanted *nomen dubium* and therefore to suppress that name, thereby eliminating any further waste of time in discussion as to the possible identity of the taxonomic species which it was intended to represent. If these general conclusions were to be accepted by the Commission, a number of routine decisions, in regard to the addition of the various names concerned to the appropriate *Official List* or *Official Index*, would follow in the wake of the main decision. The detailed decisions which (as Dr. Arkell agrees *in Litt.*,

10, ix. 1950) would be called for on the basis discussed above, are as follows :—

- (1) that the Plenary Powers of the Commission should be used :
 - (a) to set aside all type designations, indications or selections made for the under-mentioned genera prior to the date of the proposed decision :—
 - (i) *Pictonia* Bayle, 1878 ;
 - (ii) *Rasenia* Salfeld, 1913 ;
 - (b) to designate *Pictonia baylei* Salfeld, 1913 (based upon Bayle's (1878) plate lxvi to be the type species of *Pictonia* Bayle, 1878 ;
 - (c) to designate *Rasenia involuta* (Salfeld MS.) Spath, 1935 (as represented by figs. 5a and 5b on Spath's plate 10) to be the type species of *Rasenia* Salfeld, 1913 ;
 - (d) to suppress the trivial name *cymodoce* d'Orbigny, 1850, as published in the combination *Ammonites cymodoce* ;
- (2) that the generic names *Pictonia* Bayle, 1878, and *Rasenia* Salfeld, 1913 (gender of both generic names, feminine), with the type species respectively designated therefor in (1) above, should be placed on the *Official List of Generic Names in Zoology* ;
- (3) that the under-mentioned trivial names should be placed on the *Official List of Specific Trivial Names in Zoology* :—
 - (a) the name *baylei* Salfeld, 1913, as published in the combination *Pictonia baylei*, as defined in (1)(b) above ;
 - (b) the name *involuta* (Salfeld MS.) Spath, 1935, as published in the combination *Rasenia involuta*, as defined in (1)(c) above ;
- (4) that the trivial name *cymodoce* d'Orbigny, 1850, as published in the combination *Ammonites cymodoce*, should be placed on the *Official Index of Rejected and Invalid Specific Names in Zoology*.

II. THE SUBSEQUENT HISTORY OF THE CASE

3. Registration of the present application : Upon the receipt of the first communication from Dr. Arkell on the subject of the

type species to be accepted for the genera *Pictonia* Bayle and *Rasenia* Salfeld, the problem so involved was allotted the Registered Number Z.N.(S.) 421.

4. Publication of the present application : The present application, together with Mr. Hemming's supplementary note on nomenclatorial issues, was sent to the printer on 27th December 1950. Both documents were published on 4th May 1951 in Triple Part 6/8 of Volume 2 of the *Bulletin of Zoological Nomenclature* (Arkell, 1951, *Bull. zool. Nomencl.* **2** : 178—180 ; Hemming, 1951, *ibid*, **2** : 181—187).

5. Issue of Public Notices : Under the revised arrangements prescribed by the Thirteenth International Congress of Zoology, Paris, 1948 (1950, *Bull. zool. Nomencl.* **4** : 51—56), Public Notice of the possible use by the International Commission on Zoological Nomenclature of its Plenary Powers in the present case was given on 4th May 1951 (a) in Triple-Part 6/8 of Volume 2 of the *Bulletin of Zoological Nomenclature* (the Part in which Dr. Arkell's application was published) and (b) to the other prescribed serials. In addition, such Notice was given also to certain general zoological serial publications and to a number of palaeontological serials in Europe and America.

6. Comments received : Only one comment on the present application was received during the Prescribed Six-Month Period. This was from Dr. R. Ph. Dollfus (*Paris*) who supported the action recommended in the present case. After the close of the foregoing period one further communication was received. This was a letter giving particulars of the views of the members of the Joint Committee on Zoological Nomenclature for Paleontology in America. The communications so received are reproduced in the immediately following paragraphs.

7. Support received from Dr. R. Ph. Dollfuss (Muséum National d'Histoire Naturelle, Paris) : On 25th June 1951 Dr. R. Ph Dollfus (*Muséum National d'Histoire Naturelle, Paris*) furnished to the Office of the Commission a statement setting out his

views in regard to a number of applications recently published in the *Bulletin of Zoological Nomenclature*. The following is the passage in the foregoing statement in which Dr. Dollfus indicated his support for the proposals submitted in the present case : “ Je suis pour la conservation de *Pictonia* (type : *cymodoce* Orbigny, 1850, pl. CCII, figs. 1—2) ”.

8. Statement of the view of the members of the Joint Committee on Zoological Nomenclature for Paleontology in America : On 9th April 1952 there was received a large number of letters commenting on various applications previously published in the *Bulletin of Zoological Nomenclature* from Professor G. Winston Sinclair (then of the *University of Michigan, Ann Arbor, Michigan, U.S.A.*), Chairman of the Joint Committee on Zoological Nomenclature for Paleontology in America. Included among these was a letter reporting that seven members of the Joint Committee were opposed to the present proposal as against four who were in favour of it. The foregoing letter was dated 6th February 1952, and its late receipt was apparently due to a decision to defer the despatch to the Commission of the letters containing comments by members of the Joint Committee until all the letters in question had been prepared. By the date on which this letter was received, the Prescribed Period of Public Notice had expired and the Voting Paper (V.P.(52)19) relating to this case had been prepared. It was therefore impossible to include in that Voting Paper a reference to Professor Sinclair's letter, but, when the Voting Paper was despatched (15th April) a supplementary sheet containing the particulars furnished by Professor Sinclair was issued to the Members of the Commission, who were thus placed in possession of the views of the members of the Joint Committee at the same time that they received the Voting Paper relating to the present case. The following is the text of Professor Sinclair's letter :—

The Joint Committee on Zoological Nomenclature for Paleontology in America has considered this subject, and I wish to inform you that being polled, they voted : To support the petition (four) :—(1) Bobb Schaeffer ; (2) Bryan Patterson ; (3) John B. Reeside, Jnr. ; (4) R. C. Moore. To oppose the petition (seven) :—(1) Don L. Frizzell ; (2) Katherine V. W. Palmer ; (3) Siemon W. Muller ; (4) A. Myra Keen ; (5) J. Marvin Weller ; (6) G. Winston Sinclair ; (7) John W. Wells.

III. THE DECISION TAKEN BY THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

9. Issue of Voting Paper V.P.(52)19 : On 15th April 1952, a Voting Paper (V.P.(52)19) was issued in which the Members of the Commission were invited to vote either for, or against, " the proposal relating to the names *Pictonia* Bayle, 1878, and *Rasenia* Salfeld, 1913, as specified in Points (1) to (4) on pages 186 and 187 of Volume 2 of the *Bulletin of Zoological Nomenclature* [i.e. in the Points numbered as above in paragraph 10 of the Supplementary Note by the Secretary reproduced in paragraph 2 of the present *Opinion*].

10. The Prescribed Voting Period : As the foregoing Voting Paper was issued under the Three-Month Rule, the Prescribed Voting Period closed on 15th July 1952.

11. Particulars of the Voting on Voting Paper V.P.(52)19 : At the close of the Prescribed Voting Period, the state of the voting on Voting Paper V.P.(52)19 was as follows :—

(a) *Affirmative Votes had been given by the following fifteen (15) Commissioners (arranged in the order in which Votes were received) :*

Hering ; Calman ; Dymond ; Esaki ; Pearson ;
do Amaral ; Hankó ; Bonnet ; Mertens ; Lemche ;
Cabrera ; Boschma ; Bradley (J.C.)* ; Hemming ;
Riley ;

(b) *Negative Votes, two (2) :*

Vokes ; Stoll ;

(c) *Voting Papers not returned, one (1) :*

Jaczewski.

* Except as regards Points (1)(a) and (4).

12. Declaration of Result of Vote : On 16th July 1952, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(52)19, signed a Certificate that the Votes cast were as set out in paragraph 11 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

13. Revised proposals relating to the specific name “ cymodoce ” d’Orbigny, 1850, as published in the combination “ Ammonites cymodoce ” : In March 1954 consultations were opened by the Secretary with Dr. W. J. Arkell on the question of the substitution of revised proposals relating to the specific name *cymodoce* d’Orbigny, 1850, as published in the combination *Ammonites cymodoce*, for those submitted in the paper published in the *Bulletin of Zoological Nomenclature* (2 : 187), which, though approved by the majority of the Commission in its vote on Voting Paper V.P.(52)19 had not been approved by all the members of the Commission and which had been specifically opposed by Commissioner Chester Bradley (paragraph 11). These discussions led to the submission to the Commission by the Secretary on 29th April 1955 of the following paper containing revised proposals for dealing with the above matter :—

Revised proposals relating to the specific name “ cymodoce ” d’Orbigny, 1850, as published in the combination “ Ammonites cymodoce ”
(Class Cephalopoda, Order Ammonoidea)

By FRANCIS HEMMING, C.M.G., C.B.E.

(Secretary to the International Commission on Zoological Nomenclature)

The object of the present paper is to report to the Commission that, since it voted on the proposals submitted to it in regard to the generic names *Pictonia* Bayle, 1878, and *Rasenia* Salfeld, 1913 (Class Cephalopoda, Order Ammonoidea), a development has occurred in regard to the specific name *cymodoce* d’Orbigny, 1850, as published in the combination *Ammonites cymodoce*, which in my view, calls for the further consideration of this question before an *Opinion* is prepared giving the Commission’s decision on the *Pictonia/Rasenia* problem. Particulars of the problem now to be considered are given in the following paragraphs.

2. The *Pictonia/Rasenia* problem was raised in a brief application submitted to the Commission by Dr. W. J. Arkell (*Sedgwick Museum, Cambridge University, Cambridge*). This application was published in May 1951 (*Bull. zool. Nomencl.* 2 : 178—180), but did not contain all the particulars required to enable the Commission to comply with the General Directives issued to it by the International Congress of Zoology in the matter of the content of decisions to be given in *Opinions*. In order to make good this deficiency, I judged it necessary, as Secretary, to prepare a supplementary note for the consideration of the Commission. This note, which was prepared in conjunction with Dr. Arkell, was published at the same time as his application (*ibid.* 2 : 181—187).

3. The first of the principal objects of Dr. Arkell's application was to secure for the genus *Pictonia* Bayle, 1878, a type species clearly belonging to the genus *Pictonia* as generally understood in the literature. The genus *Pictonia* Bayle was a monotypical genus, the sole originally included nominal species being *Ammonites cymodoce* d'Orbigny. Bayle gave at the same time a figure of what he regarded as being d'Orbigny's species and it is by this figure that the genus *Pictonia* Bayle has since been interpreted. Later, it transpired that Bayle had made an error of identification and that the species which he figured was not referable to *Ammonites cymodoce* d'Orbigny. The species figured by Bayle was without a valid name until in 1917 Salfeld named it *Pictonia baylei*. The nominal genus *Pictonia* Bayle was thus a genus considered by specialists in the group to have been based upon a misidentified type species, and Dr. Arkell's application was designed to secure from the Commission a decision under the procedure laid down by the Thirteenth International Congress of Zoology, Paris, 1948, by which *Pictonia baylei* Salfeld would be ruled to be the type species of the genus *Pictonia* Bayle.

4. The second of the principal objects of Dr. Arkell's application was to secure a satisfactory type species for the genus *Rasenia* Salfeld, 1913, the type species of which, under the *Règles*, was, by original designation, *Ammonites cymodoce* d'Orbigny, 1850. Dr. Arkell considered that this nominal species was unsuitable to be the type species of an important genus such as *Rasenia* Salfeld, owing to the fact that, when d'Orbigny established the nominal species *Ammonites cymodoce*, he based it upon figures considered by later workers to represent two distinct taxonomic species. Moreover, there had been later some disagreement as to the specimens in the d'Orbigny collection which should be regarded as syntypes of *cymodoce* d'Orbigny, as the result of the action of Lemoine (1904) in figuring a specimen which he claimed to be the syntype figured by d'Orbigny as figs. 3 and 4, which was the lectotype of *cymodoce* d'Orbigny by selection by Tornquist (1896), for the specimen so figured by Lemoine differed in a number of important respects from d'Orbigny's figures

of the lectotype. To overcome this difficulty, Dr. Arkell asked the Commission to use its Plenary Powers to designate as the type species of *Rasenia* Salfeld a species which without question belonged to the genus *Rasenia* as currently understood in the literature. The species which Dr. Arkell proposed should be so designated was *Rasenia involuta* Spath, 1935.

5. When I was preparing the supplementary note referred to in paragraph 2 above, it seemed to me that, in view of the fact that under Dr. Arkell's proposals the nominal species *Ammonites cymodoce* d'Orbigny was to be displaced from its position as the type species both of *Pictonia* Bayle and of *Rasenia* Salfeld and as moreover there had (as shown above) been argument as to the identity of the species so named, the name *cymodoce* d'Orbigny had become so compromised that the best course would be to suppress it altogether. Dr. Arkell did not then dissent from this proposal which was accordingly included in my supplementary note. Dr. Arkell has since informed me, however, that it would, in his view, be a mistake to suppress this name, since *cymodoce* d'Orbigny, as defined by its lectotype (i.e. by d'Orbigny's figs. 3 and 4) has given its name to an important stratigraphical zone. In the light of this information, I agree with Dr. Arkell that the name *cymodoce* d'Orbigny ought not to be suppressed and I therefore now withdraw the suggestion which I had previously made on this subject. On the other hand, this name, which formed the centre of Dr. Arkell's original application, cannot be left in the air in the decision to be taken by the Commission in this case, for this would conflict with the General Directive given to the Commission by the Congress that in every case the Ruling given in an *Opinion* must cover the whole of the problem submitted. I have accordingly discussed with Dr. Arkell the nature of the revised proposal now to be submitted to the Commission, and we are agreed that the best course would be to ask the Commission, in lieu of the proposal previously recommended, to place on record that the nominal species *Ammonites cymodoce* d'Orbigny, 1850, is to be interpreted by the lectotype selected by Tornquist (1896) (i.e. by figs. 3 and 4 on d'Orbigny's pl. 202) and, having done so, to place the specific name *cymodoce* d'Orbigny, 1850, so defined, on the *Official List of Specific Names in Zoology*, thus preserving that name for the stratigraphical zone to which it has long been applied. Dr. Arkell has informed me that he is confident that a decision on these lines will be warmly welcomed by stratigraphers.

14. Issue of Voting Paper V.P.(O.M.)(55)17 : On 29th April 1955, a Voting Paper (V.P.(O.M.)(55)17) was issued in which the Members of the Commission were invited to vote either for, or against, "the proposal relating to the specific name *cymodoce* d'Orbigny, 1850, as published in the combination *Ammonites cymodoce*, set out at the end of paragraph 5 of the

paper bearing the Number Z.N.(S.) 421 submitted by the Secretary simultaneously with the present Voting Paper” [i.e. in the paragraph numbered as above in the paper reproduced in paragraph 13 of the present *Opinion*].

15. The Prescribed Voting Period : As the foregoing Voting Paper was issued under the One-Month Rule, the Prescribed Voting Period closed on 29th May 1955.

16. Particulars of the Voting on Voting Paper V.P.(O.M.)(55)17 : At the close of the Prescribed Voting Period, the state of the voting on Voting Paper V.P.(O.M.)(55)17 was as follows :—

(a) *Affirmative Votes had been given by the following twenty-three (23) Commissioners (arranged in the order in which Votes were received) :*

Stoll ; Hering ; Vokes ; Boschma ; Mertens ; Lemche ;
Bonnet ; Tortonese ; Hemming ; Key ; Esaki ;
Kühnelt ; do Amaral ; Mayr ; Hankó ; Prantl ; Riley ;
Bodenheimer ; Bradley (J.C.) ; Dymond ; Miller ;
Jaczewski ; Cabrera ;

(b) *Negative Votes, two (2) :*

Holthuis ; Sylvester-Bradley ;

(c) *Voting Papers not returned :*

None.

17. Declaration of Result of Vote : On 30th May 1955, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(O.M.)(55)17, signed a Certificate that the Votes cast were as set out in paragraph 16 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

18. Preparation of the Ruling given in the present “ Opinion ” : On 22nd March 1956 Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a Certificate that the terms of that Ruling were in complete accord with those of the proposal approved by the International Commission in its Vote on Voting Paper V.P.(52)19, as modified in one respect by the Vote taken on Voting Paper V.P.(O.M.)(55)17.

19. Original References : The following are the original references for the names placed on *Official Lists* and *Official Indexes* by the Ruling given in the present *Opinion* :—

baylei, *Pictonia*, Salfeld, 1913, *Quart. J. geol. Soc. Lond.* **69** : 429

cymodoce, *Ammonites*, d’Orbigny, 1850, *Paléont. franc.*, Terr. Jurassiques, 1 (Cephalop.) : 534 pl. 202, figs. 3—4 *nec* figs. 1—2

involuta, *Rasenia*, Spath, 1935, *Meddelelser Grønland* 99 (No. 2) : 48, pl. 10, figs. 5a, 5b

Pictonia Bayle, 1878, *Explic. Carte géol. France* 4 (Atlas) : explic. pl. 66

Rasenia Salfeld, 1913, *Quart. J. geol. Soc. Lond.* **69** : 429

20. Family-Group-Name Problems : Both the generic name *Pictonia* Bayle and the generic name *Rasenia* Salfeld have been taken as the base for family-group names. The names concerned have already been placed on the *Official List of Family-Group Names in Zoology* by the International Commission in *Direction* 14 (1955, *Ops. Decls. int. Comm. zool. Nomencl.* **10**(18) : 463—480).

21. At the time of the submission of the present application the name applicable to the second portion of a binomen was “ trivial name ”. This was altered to “ specific name ” by the Fourteenth International Congress of Zoology, Copenhagen, 1953, which at the same time made corresponding changes in the titles of the *Official List* and *Official Index* of names of this category. These changes in terminology have been incorporated in the Ruling given in the present *Opinion*.

22. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

23. The present *Opinion* shall be known as *Opinion* Four Hundred and Twenty-Six (426) of the International Commission on Zoological Nomenclature.

DONE in London, this Twenty-Second day of March, Nineteen Hundred and Fifty-Six.

*Secretary to the International Commission
on Zoological Nomenclature*

FRANCIS HEMMING